# SNMP Polling Delay

## Contents



## SNMP polling delay

### ICSeverity

5 - Notice

### Impact

MIB responses are delayed.

### Description

Simple Network Management Protocol (SNMP) is a low priority network management protocol. This message is a notification message from SNMP dispatcher to user notifying that SNMP Response time exceeded the Default threshold time. This would happen while polling expensive and time consuming OID in the MIBs, or too many OIDs concurrently. The error messages usually indicate the OID/MIB that is experiencing the delay. Please see examples below: SNMP-3-RESPONSE_DELAYED: processing GetNext of cefcFRUPowerStatusEntry.1 (# msecs) SNMP-3-RESPONSE_DELAYED: processing GetNext of ciscoFlashFileEntry.1 (# msecs) SNMP-3-RESPONSE_DELAYED: processing GetNext of cefcFanTrayStatusEntry.1 (# msecs) This cannot have any impact on the system. The logs are informational so they can be ignored or you can delete these logs permanently. However if the polling is being done for business purpose, you must consider limiting the hosts that can query the device or limit the OIDs that can be polling, or both.

### SyslogMessage

```
SNMP-3-RESPONSE_DELAYED
```

### MessageSample

```
Jan 31 15:00:19.270 EST <> %SNMP-3-RESPONSE_DELAYED: processing Get of ifHCInOctets.394344 (19164 msecs)
```

## ProductFamily

- Cisco Catalyst 3650 Series Switches
- Cisco Catalyst 3850 Series Switches
- Cisco Catalyst 9200 Series Switches
- Cisco Catalyst 9300 Series Switches
- Cisco Catalyst 9400 Series Switches
- Cisco Catalyst 9500 Series Switches
- Cisco Catalyst 9600 Series Switches
- Cisco Catalyst 6800 Series Switches
- Cisco 4000 Series Integrated Services Routers
- Cisco ASR 1000 Series Aggregation Services Routers
- Cisco Catalyst 3750-X Series Switches
- Cisco Catalyst 2960-X Series Switches

## Regex

N/A

## Recommendation

There are several well known defects that can cause this error to be seen. Assuming you are running a fixed release and still see this problem, do these steps to potentially work around the error. You can check the outputs of the command "show proc cpu sorted" to ensure the CPU utilization is not too high and the device is functioning optimally. The "show proc cpu | i SNMP Engine" command can also show the amount of utilization due to SNMP Engine which processes incoming requests. Device# show process cpu sort CPU utilization for five seconds: 99%/0%; one minute: 22%; five minutes: 18% PID Runtime(ms) Invoked uSecs 5Sec 1Min 5Min TTY Process 189 1535478456 697105815 2202 88.15% 13.40% 8.74% 0 SNMP ENGINE << Elevated CPU lasting a minute or more for this process can be an indication your polling is too aggressive, and the device is having trouble keeping up with the volume and frequency of requests. Elevated CPU spikes lasting only a few seconds are often expected and not a cause for concern. SNMP is considered a low priority process and can yield CPU processing if a more important process requires it. You can check the output of the command "show snmp stats oid" to verify the top OIDs being polled. You can increase or decrease the response threshold limit value for SNMP MIBs, using the next command in global configuration mode: snmp monitor response threshold-limit The threshold limit can be set to any value between 1000 to 5000 ms and it is a non-impacting change. Increasing it beyond the default of 2000ms gives the device in question more time to respond to a given SNMP request if your delay times are <5000ms. You can also use the configuration command "no snmp monitor response”. This command would disable the mechanism to compare response time with threshold and no SNMP delay syslogs can be displayed. SNMP requests for the delayed MIB, and possibly subsequent requests can still time out, but the system cannot print a log when this occurs. Finally, if a specific OID is continually causing the problem, you can block the OID with an SNMP view. Example global configuration: snmp-server view TAC iso included snmp-server view TAC 1.3.6.1.4.1.9.9.91.1.1.1.1 excluded snmp-server community view TAC RO

## Commands

#show version

#show module

#show proc cpu sort

#show run | s snmp

#show snmp

#show snmp stats oid